Artificial intelligence and machine learning

We continue to build on our capacity to capitalise on artificial intelligence (AI) and machine learning (ML) across the group.

Critical importance

We have reached the point at which AI and ML are powerful and mature enough to make a critical difference to value creation. Increasingly, AI and ML are part and parcel of how we grow and succeed in improving people's lives around the world. It is a mission-critical enabler for us.

From image-recognition to the ability to interpret text, AI and ML technology has advanced rapidly in recent years. As a data-rich business, we have the fundamental asset – the essential ingredient – to really make the most of this technology's strengths and potential.

Importantly, a natural positive cycle accelerates value creation – the more quality data you can flow into ML, the better your algorithms will be. Better algorithms make better tools which create better services that, in turn, attract and keep more customers, creating yet more good data to flow back into your ML. It is a quality and quantity game – one where we have a distinct advantage in our markets: strong local businesses generating volumes of valuable data for ML. So, for example, when we train open-source image-recognition tools on our proprietary data sets for classifieds, we obtain much more accurate models than otherwise possible. These models, in turn, serve to deliver a more personalised buyer experience and a more streamlined seller experience.

Our central AI and ML team focuses on three key tasks:

1. **To accelerate** – help all organisations in the portfolio activate the tools and opportunities necessary to get the value of ML realised as fast as possible.

2. **To scale** – ensure we use ML efficiently throughout the entire organisation, to serve customers better and improve our operational performance and efficiency.

3. **To embed AI and ML as a super-utility across the organisation** – a horizontal layer of competence and technology that everyone uses, much as we use electricity today. This naturally leads to a new and exciting era of AI and ML by design.

Extending our capabilities

Building on the foundation we established in the last financial year, we have significantly extended our capabilities in AI and ML across the group. The teams have grown as has the capacity to execute across our three core segments: Classifieds, Payments and Fintech, and Food Delivery.

Implementing more models

Fuelled by the increase in capabilities, the number and depth of ML models going into production have almost doubled in a year. We now have many different targeted models touching every aspect of the platforms.

Leveraging learning

We are looking to take full advantage of our platform businesses across Classifieds, Payments and Fintech, and Food Delivery. For example, by applying best practice from the centre and leveraging learning in one segment across all segments. This is one of the key ways we ensure we make the most of the opportunities to build better recommendations engines, enhance search and manage data more effectively – so we can ultimately provide ever-better services and experiences for our users.

Creating a network of collaboration

We are boosting collaboration across the group through shared technologies. We leverage the ecosystem of ML experts across the group to share knowledge, practices and ML models. This enables local teams to jump-start developments, accelerate learning and bring models into production faster so that different businesses can develop new ML models, for example, for recommendation or dynamic pricing, quicker and more efficiently.

Training leaders

This year we continued and accelerated our AI and ML training for senior leaders from across the different businesses. We offer all leaders in the group the opportunity to attend AI For Growth, a three-day residential programme focused-designed by Prosus. It focuses on building shared understanding, a common language and insights into how to apply and make the most of AI and ML in their businesses. By demystifying the subject, putting the emphasis on practical use cases, and by identifying the key elements of successful AI strategies, the programme gives leaders the tools to make decisions on AI and ML for positive business impact. The programme runs approximately every eight weeks. To date, more than 100 leaders from across the group have been trained on the programme. It has helped activate a number of AI and ML initiatives in businesses around the world.

We are looking to go further with our leadership training through the development of an additional programme, AI In Depth. Planned for the coming financial year, this programme will dig deeper into key areas such as AI by design.

Training engineers

Across the industry, demand for data scientists remains higher than supply. One of the ways we are tackling this is by upskilling our own people, particularly our engineers and others who have a good base knowledge. The training programme lasts about six months and participants can gain a recognised qualification in ML. So far, more than 80 people from across the group have gained this qualification.

Artificial intelligence and machine learning continued

Training product managers
As our AI and ML teams develop more and more models, our product managers need to be able to take these models, put them into production, manage, maintain and upgrade them. We have introduced Machine Learning for Product Managers, a training programme designed to ensure product managers have the tools and knowledge to make the most of the many models we develop.

Training everyone
Last but not least, we have also introduced AI For Everyone. As the name suggests, this introductory training programme aims to give everyone across the group a solid grounding in AI and ML.

So far, more than 4 000 people around the world have undertaken this training. It is a critical part of our ongoing aim to embed AI and ML throughout the group so that it becomes key to our thinking, our everyday work, our innovative, entrepreneurial, always-learning and advancing culture.

Building across the segments
In Classifieds, we continue to apply AI and ML to make every step of the value chain better, faster, and cheaper – from onboarding customers to listing, verifying, selling, searching for and buying items. It plays a key part in improving the experience for both buyers and sellers – making it quicker, easier, safer, more effective and in turn increasing trading activity and customer retention.

In Payments and Fintech, AI and ML are supporting advances in fraud detection. We are also offering ground-breaking new credit services to underbanked people in India, based on ML algorithms for credit risk management.

In Food Delivery, we are using AI and ML to manage the mass of data and many different elements that go into delivering the right food to the right place as quickly as possible and critically, on time. iFood for example is using ML to predict how long it takes to prepare a specific dish at a particular time, so that the driver arrives just in time to collect the food for delivery. iFood also leverages ML to optimise delivery, for instance by batching orders. These applications of ML orders drive down the total cost of operation as well as increasing customer satisfaction and retention.

Looking ahead
We have started to support a programme of education called Data Science For Social Good. It began last year and we plan to continue and increase our involvement, for example by some of our people mentoring on the programme. This is part of our wider commitment to support the responsible use of AI for good.

We continue to focus on increasing the scale and speed of our AI and ML implementation through the adoption of specific platforms that streamline ML at scale. The aim is to embed ML throughout our operations and businesses and to compress the time it takes for a good idea to get into the hands of the customer where it actually makes a difference and adds value.

Aligned to this, we will still further our focus on AI by design, or the practice of designing new products and services so that they can automatically learn from data and user interactions. Our goal is that AI by design becomes a mindset and a capability shared across the organisation.

We are bringing all this together into an exciting initiative that we are taking forward into next year. A team drawn from the AI and ML experts at Prosus, together with product and domain experts from the segment, is focusing on developing in a short period of time innovative product concepts that can be tested, with the best ones being taken further. We are focusing here on making big advances, rather than incremental innovation. It reflects how we are intensifying commitment to scale and speed up how we turn AI and ML to the advantage of our companies, our customers, and all our stakeholders.

For more information on how AI and ML are being applied across the group in various businesses, see the performance review on pages 35 to 52.

"As well as sharing technologies, we are also making sure people have access to all the AI and ML skills, knowledge and competence from across the group. This network of collaboration enables people in the different businesses to advance with a jump, rather than a small step – to go further, faster. We want to remove any bottlenecks from the idea to the moment when we can create value. So we can really increase the speed and positive impact of AI and ML on our business."

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